

The examination is being carried out on the **following application documents:**

**Description, Pages**

1-45                    as originally filed

**Claims, Numbers**

1-38                    received on                    07.08.2007    with letter of            07.08.2007

**Drawings, Sheets**

1/7-7/7                as originally filed

documents cited in the ISR by the USPTO:

**US 5502 056** (Breitbarth) (D 1) teaches (see e.g. column 2 lines 14-24) the claimed invention of a pharmaceutical composition comprising a compound isolated from a botanical raw material (i.e. the isolated material is Coffea to isolate a methylation modifying compound of a water or alcohol extract), wherein when the pharmaceutical composition and/or isolated compound is administered to a subject, the compound would have the intrinsic effect of inhibiting a demethylating enzyme to promote the general health of the subject. A composition containing caffeine solubilized with para-amino benzoic acid is described. Preferably the caffeine is delivered in the form of an aqueous microdispersion including a non-metallic microparticulate carrier. When administered orally, in small volumes, containing small doses of these agents, this composition has been demonstrated to have stimulant and antsporific actions that result in elevated mood, decreased fatigue and increased capacity for work.

**US 6399796** (D 2) concerns an improved process and composition for isolation of steroids containing a 5,7-diene functionality from a sterol mixture such as in higher plants like tobacco, soybean, tomato and alfalfa (see column 5, lines 50-62).

**US 6760 359** (D 3) concerns a laser system comprising a laser diode with an active region and reflectors at both ends. An outcoupling aperture is located between the reflectors to couple light out of the device through the surface.

**documents cited by the EPO:**

**D 1** (Derwent abstract of CN1403137) already reports on a heart-nourishing tea capsule and its preparation process. American ginseng is first prepared into American ginseng liquid through crushing, reflux extraction with water or alcohol solution, filtering, cold storing and other steps; red sage, licorice, achyranthes root, ophiopogon tuber and schisandra are thrice decocted and the merged decoction liquid is filtered and pH regulated to 5-8; the filtrate is merged with the American ginseng liquid, the merged liquid is further prepared into capsule through macroporous resin adsorption, pure water elution, ethanol elution, depression distillation to recover solvent, concentration, vacuum drying, crushing, pelletizing and capsulizing.

**D 2** (Derwent abstract of KR2003088329) describes the extraction of therapeutic material for diabetes characterized by the steps of: dipping 40-50% of Aralia continentalis kitagawa, Trichosanthis radix, red ginseng, Rehmannia glutinosa, Asian celandine, corn's hair which are dried and pulverized, in 50-60% of purified water regulated pH 6.0-6.5 by addition of citric acid or organic acid; sterilizing them, followed by drying or concentrating their filtrate regulated to pH 6-8 by addition of a potassium hydroxide solution under reduced pressure and additionally adding additives....

**D 3** (Derwent abstract of JP2002255837) already discloses an aldose-reductase inhibitor for preventing e.g. various diabetic complications, comprising extract of meadowsweet, tea etc.. In the Example 10 g of dried ground parts of meadow sweet was extracted with 300 ml of 50% aqueous ethanol solution for 5 days with occasional stirring. The extract was filtered, evaporated and freeze-dried etc..

**D 4** (WO 2004/002504) describes the preparation of aqueous extract comprising saponins used e.g. as antilipemic or antiinflammatory, comprises mixing waste product from butter tree of Sapotaceae family with water, incubating under alkaline conditions and removing solids from the alkaline mixture.

**D 5** (WO 02/102397) already shows the use of an extract of the root of balloon-flower for preventing and treating a degenerative brain disease or for enhancing memory. Preparation of hot water and of ethanol extracts, which are then filtered and concentrated, is shown. Therefore, to sum up, the subject-matter of present claims 1-13, 19-38 is not considered to be novel.

The above mentioned objections should be overcome by suitable amendment or explanation. If not, refusal of the application (Art. 97 (1) EPC) should be expected. In the case where new claims are filed, they should be accompanied by carefully adapted pages of the description (Rule 42 (1) EPC).



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07.08.08

Reference PCB/P05871PEP	Application No./Patent No. 06734215.4 - 2107 / 1843734 PCT/US2006003686
Applicant/Proprietor SIGNUM BIOSCIENCES, INC., et al	

### Communication

The extended European search report is enclosed.

The extended European search report includes, pursuant to Rule 62 EPC, the supplementary European search report (Art. 153(7) EPC) and the European search opinion.

Copies of documents cited in the European search report are attached.

2 additional set(s) of copies of such documents is (are) enclosed as well.

### Refund of the search fee

If applicable under Article 9 Rules relating to fees, a separate communication from the Receiving Section on the refund of the search fee will be sent later.





**SUPPLEMENTARY  
PARTIAL EUROPEAN SEARCH REPORT**

Application Number

which under Rule 63 of the European Patent Convention EP 06 73 4215  
shall be considered, for the purposes of subsequent  
proceedings, as the European search report

<b>DOCUMENTS CONSIDERED TO BE RELEVANT</b>			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	<p>DATABASE WPI Week 200350 Thomson Scientific, London, GB; AN 2003-524053 XP002476502 &amp; CN 1 403 137 A (UNIV SHENZHEN INST HONGKONG SCI &amp; ENG) 19 March 2003 (2003-03-19) * abstract *</p> <p>-----</p> <p>DATABASE WPI Week 200422 Thomson Scientific, London, GB; AN 2004-235677 XP002476503 &amp; KR 2003 088 329 A (HEO J G) 19 November 2003 (2003-11-19) * abstract *</p> <p>-----</p> <p>-----</p>	1-13, 19-38	INV. A61K36/00 A61K36/74 A61K36/81
X		1-13, 19-38	
		-/-	
			TECHNICAL FIELDS SEARCHED (IPC)
			A61K A61P
<p>The supplementary search report has been based on the last set of claims valid and available at the start of the search.</p>			
<b>INCOMPLETE SEARCH</b>			
<p>The Search Division considers that the present application, or some or all of its claims, does/do not comply with the EPC to such an extent that a meaningful search into the state of the art cannot be carried out, or can only be carried out partially, for the following claims:</p>			
<p>Claims searched completely :</p>			
<p>Claims searched incompletely :</p>			
<p>Claims not searched :</p>			
<p>Reason for the limitation of the search:</p>			
<p>see sheet C</p>			
1	Place of search	Date of completion of the search	Examiner
	Munich	30 July 2008	Thalmair-De Meyere
<p><b>CATEGORY OF CITED DOCUMENTS</b></p>			
<p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p>			
<p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons</p>			
<p>&amp; : member of the same patent family, corresponding document</p>			



DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (IPC)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
X	DATABASE WPI Week 200332 Thomson Scientific, London, GB; AN 2003-335689 XPO02476504 & JP 2002 255837 A (MIKIMOTO SEIYAKU KK) 11 September 2002 (2002-09-11) * abstract *-----	1-13, 19-38	
X	WO 2004/002504 A (OLE KAAE HANSEN HOLDING APS [DK]; HANSEN OLE KAAE [DK]) 8 January 2004 (2004-01-08) * the whole document *-----	1-13, 19-38	
X	WO 02/102397 A (KOREA RES INST CHEM TECH [KR]; KIM YOUNG-SUP [KR]; RYU SHI-YONG [KR];) 27 December 2002 (2002-12-27) * page 7; claims 1,4,5,8; example 1; tables 1a,1b *-----	1-13, 19-38	TECHNICAL FIELDS SEARCHED (IPC)



Claim(s) not searched:  
14-18

Reason for the limitation of the search:

The present claim 1 relates to an extremely large number of possible compositions obtained by a certain process. Support and disclosure in the sense of Article 84 and 83 EPC is to be found however for only a very small proportion of the compositions claimed, see pages 42-44 of the description. The non-compliance with the substantive provisions is to such an extent, that a meaningful search of the whole claimed subject-matter of the claim could not be carried out (Rule 63 EPC and Guidelines B-VIII, 3). The extent of the search was consequently limited to the "botanical raw material" according to claim 9 except for "tocopherol" which is not regarded as a "botanical raw material".

Concerning the subject-matter of claims 14-18, it is pointed out that no search could be carried out, since the compositions are defined merely by functional parameters, i.e. e.g. "...wherein said composition contains a carboxyl methylation modifying compound derived from a botanical raw material" or "...wherein the composition inhibits a demethylating activity of a demethylating enzyme that acts on a phosphoprotein phosphatase enzyme and thereby stimulates the net carboxyl methylation of the phosphoprotein phosphatase enzyme".

ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.

EP 06 73 4215

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
The members are as contained in the European Patent Office EDP file on  
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

30-07-2008

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
CN 1403137	A	19-03-2003	NONE			
KR 2003088329	A		NONE			
JP 2002255837	A	11-09-2002	NONE			
WO 2004002504	A	08-01-2004	AU 2003236817 A1 US 2005233016 A1 US 2007249517 A1		19-01-2004 20-10-2005 25-10-2007	
WO 02102397	A	27-12-2002	JP 2005501018 T KR 20050021026 A KR 20020096925 A KR 20050008598 A US 2004185128 A1		13-01-2005 07-03-2005 31-12-2002 21-01-2005 23-09-2004	